

ZOOLOGY.—*A new species of Amphipoda from Uruguay and Brazil.*<sup>1</sup> CLARENCE R. SHOEMAKER, U. S. National Museum.

In July, 1941, some amphipods of the genus *Hyaella* Smith, taken in the river Imbé, a stream flowing into Lake Tramadai in the State of Rio Grande do Sul, Brazil, were sent to the U. S. National Museum for identification. These specimens superficially resembled *Hyaella azteca* var. *inermis* Smith, but, upon dissection, characters were observed that distinguish them from that form of *Hyaella azteca* (Saussure). I am, therefore, describing them as a new species, as follows:

*Hyaella curvispina*, new species

*Male*.—Eye dark, slightly reniform or oval. Antenna 1 about as long as the head plus the first three or four body segments and reaching to about the middle of the flagellum of antenna 2. Peduncular joints successively shorter and narrower; flagellum longer than peduncle and composed of about 11 joints, which do not carry sense-organs. Antenna 2, fifth peduncular joint longer than fourth; flagellum much longer than peduncle and composed of about 14 joints, which do not carry sense-organs.

Right mandible, molar strong and well developed, seta on inside edge and a tuft of setules at base between it and spine-row, which contains two long and one shorter spine; cutting-edge toothed and accessory plate well developed and toothed; a knoblike protuberance on inside surface at base of molar. Maxilla 1, inner plate with two apical plumose setae; outer plate with nine serrate and pectinate spine-teeth; palp small and ending in a narrow sharp point. This palp is much smaller in proportion than in *H. azteca*. Maxilla 2 normal, inner plate shorter than outer and bearing, in addition to the terminal spines, two plumose setae on upper inner margin. Maxillipeds, inner plate longer than outer plate and reaching beyond the middle of outer plate, the truncate upper margin armed with three teeth; outer plate rather short, inner margin armed with two or three rows of slender spines, but no spine-teeth; palp rather short and broad with the inner dis-

tal corners of the second and third joints produced into lobes; fourth joint rather weak and bearing a long slender nail.

Gnathopod 1 shorter and stouter than in *H. azteca*; fifth joint subequal in length to sixth, lobe of lower margin bearing a row of long and short spines; sixth joint a little longer than wide, palm oblique and convex, armed throughout with a row of slender spines, and defined by a lobe bearing a short spine, below which on the inside surface of joint is a similar spine; hind margin of joint bearing a slender spine and an armament of the minute pectinate scales which occur also in *H. azteca*; the front margin also bears a spine near the middle and an armament of pectinate scales distally; seventh joint fitting palm, bearing a nail and a few pectinate scales on outer margin, and a row of minute spinules on inner margin. Gnathopod 2 rather short and robust; palm quite oblique, convex and with only a mere suggestion of the tooth normally found near the hinge of the seventh joint in *H. azteca*. The hind margin of sixth joint is rather short and somewhat produced or lobed at the defining angle of palm; the inner surface of the defining lobe of the palm bearing an armament of pectinate scales. Seventh joint fitting palm with the apex dipping into a shallow pocket.

Peraeopods 1 and 2 much alike in shape and spinous armature, but 2 slightly the longer. Peraeopods 3 to 5 much alike but increasing consecutively in length, second joints much expanded with lower hind margin produced into a broad rounding lobe.

Lower hind corners of metasome segments 2 and 3 somewhat produced and sharply angular. Uropods not very spinose, but the inner ramus of uropod 1 bearing on the inner margin usually one but sometimes two long slender curved spines which are very characteristic of the males of this species. Uropod 3 with ramus subequal in length to peduncle. Telson as long as wide, reaching to about the end of peduncle of uropod 3, and bearing apically two stout spines and several slenderer and shorter spines. Length of male 9 mm from front of head to end of uropod 1.

The gill arrangement is the same in both

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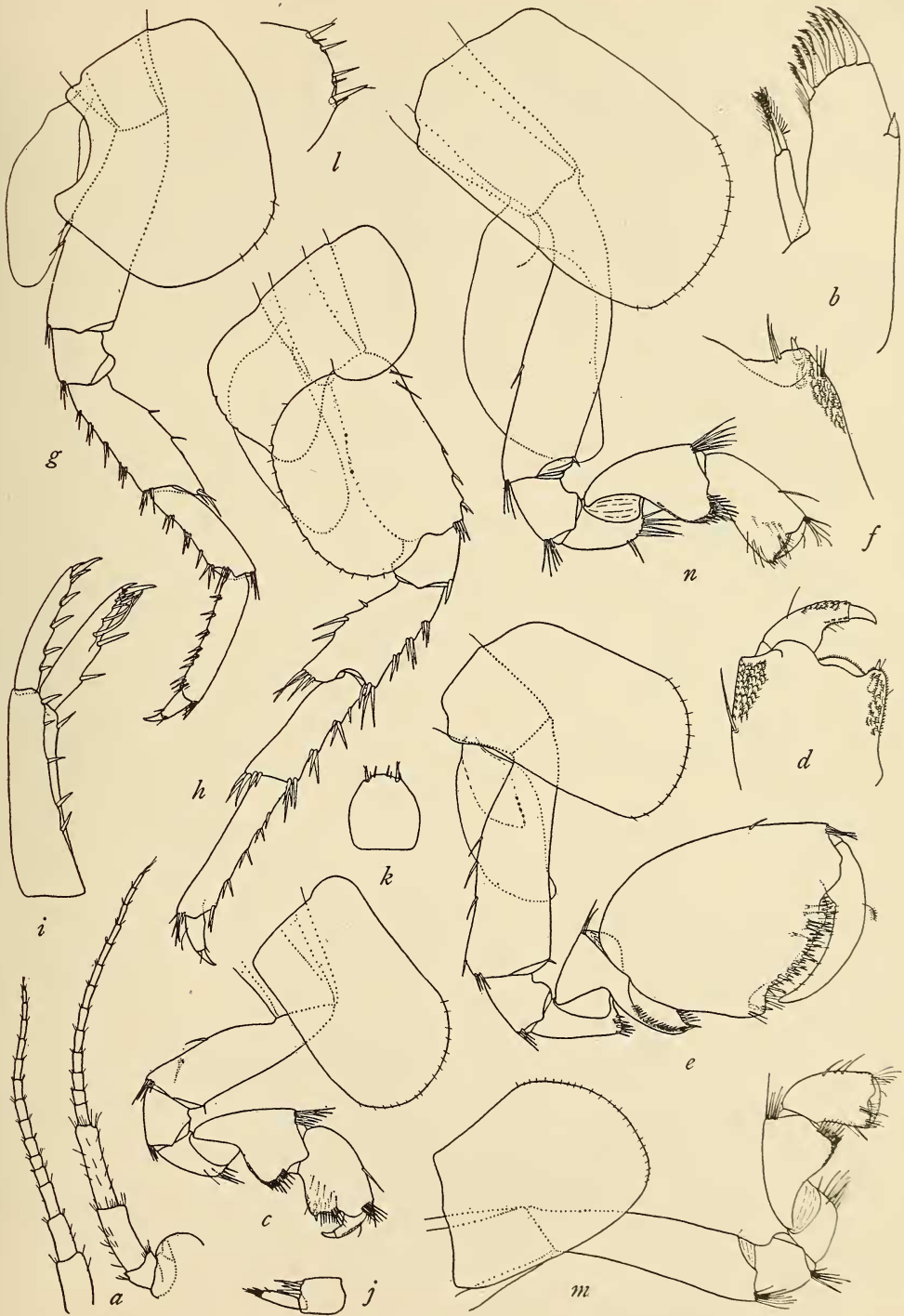


Fig. 1.—*Hyalella curvispina*, new species: Male: *a*, antenna 1 and antenna 2; *b*, maxilla 1; *c*, gnathopod 1; *d*, end of gnathopod 1 showing the pectinate scales on inside surface of joint; *e*, gnathopod 2; *f*, defining angle of palm of gnathopod 2 showing the pectinate scales on inside surface; *g*, peraeopod 2; *h*, peraeopod 3; *i*, uropod 1; *j*, uropod 3; *k*, telson; *l*, end of telson showing spines. Female: *m*, gnathopod 1; *n*, gnathopod 2.

sexes. Each of the mesosome segments 2 to 6 bears a pair of coxal gills and a pair of simple lateral sternal gills, while segment 7 bears only a pair of lateral sternal gills. This species has no dorsal teeth.

*Female*.—The female is like the male except in the gnathopods and the first uropod. Gnathopod 1 is longer and slenderer than in the male; the sixth joint is proportionately narrower and the palm is transverse; the front and hind margins bear a few spines and a few pectinate scales. Gnathopod 2 much like gnathopod 1 but longer and slenderer; sixth joint equal in length to fifth, widening distally and with palm slightly chelate; hind margin well provided with pectinate scales on inner distal surface. Uropod 1 does not have the long curved spines on the inner ramus. Length of female 9 mm from front of head to end of uropod 1.

*Type locality*.—Small mud puddles which dry up in summer (5 to 15 cm deep), near Montevideo, Uruguay, December, 1932, Ricardo Thomsen, collector. Type, a mature male, U. S. N. M. no. 79388.

*Other records*.—There are specimens of this species in the National Museum taken at the following localities:

Paso de la Arena (fresh water), near Montevideo, Uruguay, November 27, 1925, Ricardo Thomsen, collector.

Montevideo, Uruguay (from General Buzano's Place), December 10, 1925, Ricardo Thomsen, collector.

Pajas Blancas, quite near the sea coast, but still fresh water, near Montevideo, Uruguay, December 7, 1932, Ricardo Thomsen, collector.

Carrasco Creek, near Montevideo, Uruguay, December 11, 1925, Ricardo Thomsen, collector.

From a well, 20 meters deep, subsoil line, near Montevideo, Uruguay, July or December, 1932, Ricardo Thomsen, collector.

Among the roots of *Pontederia* and *Rhynchospora* in the river Imbé, flowing into the Lagoa de Tramandai; littoral of Rio Grande

do Sul, Brazil, June, 1941, Herm. Kleerekoper, collector.

*Remarks*.—The gill arrangement is slightly different from that of *Hyalella azteca* of North America. In *H. azteca* there are no lateral sternal gills on the second body segment, whereas they are present in *H. curvispina*.

Prof. A. S. Pearse, in describing *Hyalella ornata* from the State of Veracruz, Mexico, said that the specific name was given on account of the tubercles that cover parts of the anterior margins of the last two segments and the posterior margins of the last four segments of the first gnathopods of both sexes and that are found also on the same places on the second gnathopods of the female, but appear only on the posterior margins of the fourth and sixth segments of the second gnathopods of the male. These tubercles, when highly magnified, have the appearance of oblong scales armed on their convex edges with very minute teeth or spinules, which give them a pectinate appearance. On the sixth joint of the first gnathopods of both sexes these scales are directed away from the central longitudinal axis of the joint on the outside surface and toward the axis on the inside surface. Those of the seventh joint are directed away from the inner concave margin on the outside and toward it on the inside surface.

I have examined specimens of *Hyalella* from several localities in the state of Veracruz, which is the type locality for *H. azteca*, and find that they all possess these pectinate scales. I am therefore of the opinion that *H. ornata* is a synonym of *H. azteca*. These scales appear on all the specimens of *Hyalella* from Mexico I have been able to examine. In passing northward, westward, and eastward from Mexico in the United States the scales appear to become considerably less in number and less conspicuous. I believe that all the specimens of *Hyalella* I have seen from Mexico and the United States are *Hyalella azteca*, which is a very variable species, and that they all possess these scales in varying degrees.